

What is claimed is:

1. A portable device capable of providing a plurality of selectable display modes for providing an image to a viewer, said portable device comprising:

an image source;

a light source for providing illuminating light to the image source for providing output light from the image source; and

an optical arrangement for forming the image from the output light provided by the image source along an optical path of the optical arrangement, wherein the optical arrangement is adapted to change so that said image forming is based on a selected one of the display modes.

2. The portable device of claim 1, wherein the selectable display modes include:

a first mode for allowing the viewer to perceive the image by placing an eye of the viewer in the optical path; and

a second mode for allowing the viewer to perceive the image formed on a surface disposed in the optical path.

3. The portable device of claim 1, wherein the selectable display modes include:

a first mode for allowing the viewer to perceive the image by placing an eye of the viewer in the optical path adjacent to the portable device; and

a second mode for allowing the viewer to perceive the image formed on a surface disposed in the optical path adjacent to the portable device.

4. The portable device of claim 1, wherein the selectable display modes include:

a first mode for allowing the viewer to perceive the image by placing an eye of the viewer in the optical path adjacent to the portable device; and

a second mode for allowing the viewer to perceive the image formed on a surface disposed in the optical path at a distance from the portable device.

5. The portable device of claim 1, wherein the selectable display modes include:

a first mode for allowing the viewer to perceive the image by placing an eye of the viewer in the optical path at a distance from the portable device; and

a second mode for allowing the viewer to perceive the image formed on a surface disposed in the optical path adjacent to the portable device.

5

6. The portable device of claim 1, wherein the selectable display modes include:

a first mode for allowing the viewer to perceive the image by placing an eye of the viewer in the optical path at a distance from the portable device; and

10 a second mode for allowing the viewer to perceive the image formed on a surface disposed in the optical path at a distance from the portable device.

7. The portable device of claim 1, wherein the selectable display modes include:

a first mode for allowing the viewer to perceive the image by placing an eye of the viewer in the optical path adjacent to the portable device; and

15 a second mode for allowing the viewer to perceive the image by placing the eye in the optical path at a distance from the portable device.

8. The portable device of claim 1, wherein the selectable display modes include:

20 a first mode for allowing the viewer to perceive the image formed on a first surface disposed in the optical path adjacent to the portable device; and

a second mode for allowing the viewer to perceive the image formed on a second surface disposed in the optical path at a distance from the portable device.

9. The portable device of claim 3, wherein the selectable display modes further

25 include a third mode for allowing the viewer to perceive the image by placing the eye in the optical path at a distance from the portable device.

10. The portable device of claim 3, wherein the selectable display modes further

30 include a third mode for allowing the viewer to perceive the image formed on a further surface disposed in the optical path at a distance from the portable device.

11. The portable device of claim 10, wherein the selectable display modes further include a fourth mode for allowing the viewer to perceive the image by placing the eye in the optical path at a distance from the portable device.

5 12. The portable device of claim 1, wherein the image source is a reflective-type microdisplay device.

13. The portable device of claim 1, wherein the image source is a transmissive-type microdisplay device.

10 14. The portable device of claim 1, wherein the image source is an emissive-type microdisplay device.

15 15. The portable device of claim 2, wherein the light source comprises:
a first lighting device powered by one or more batteries disposed within the portable device; and
a second lighting device having a light guide for conveying to the portable device a light beam provided by an external light source, and wherein
the first lighting device is used to provide the illuminating light to the image
20 source when the selected one of the display modes is the first mode, and
the second lighting device is used to provide the illuminating light to the image source when the selected one of the display modes is the second mode.

25 16. The portable device of claim 10, wherein the light source comprises:
a first lighting device powered by one or more batteries disposed within the portable device; and
a second lighting device having a light guide for conveying to the portable device a light beam provided by an external light source, and wherein
the first lighting device is used to provide the illuminating light to the image
30 source when the selected one of the display modes is either the first mode or the second mode, and

the second lighting device is used to provide the illuminating light to the image source when the selected one of the display modes is the third mode.

17. The portable device of claim 11, wherein the light source comprises:

5 a first lighting device powered by one or more batteries disposed within the portable device; and

a second lighting device having a light guide for conveying to the portable device a light beam provided by an external light source, and wherein

10 the first lighting device is used to provide the illuminating light to the image source when the selected one of the display modes is the first mode, the second mode or the fourth mode, and

the second lighting device is used to provide the illuminating light to the image source when the selected one of the display modes is the third mode.

18. The portable device of claim 15, wherein the external light source comprises a control device capable of operating

in a first operating mode for preventing the light beam provided by the external light source from being conveyed by the light guide to the portable device, and

20 in a second operating mode for allowing the light beam from the external light source to be conveyed by the light guide to the portable device, and wherein the portable device further comprises means, responsive to the display modes, for sending a signal to the control device for selecting the first operating mode when the selected one of the display modes is the first mode, and for selecting the second operating mode when the selected one of the display modes is the second mode.

25 19. The portable device of claim 1, further comprising a polarizing device, disposed adjacent to the image source, for selecting a first polarization state in the illuminating light to the image source and a second polarization state in the output light from the image source, wherein the first polarization state is different from the second polarization
30 state.

20. The portable device of claim 12, further comprising a polarizing beam-splitter, disposed adjacent to the image source, for selecting a first polarization state in the illuminating light to the image source and a second polarization state in the output light from the image source, wherein the first polarization state is different from the second polarization state.
- 5